60

907571

MATERIAL SAFETY DATA SHEET

Diamond Shamrock
Refining and Marketing
Company

MSDS NUMBER: M2979

MSDS DATE: 06-08-87

PRODUCT NAME: **GENUINE™ ANTIFREEZE**

24 HOUR EMERGENCY PHONE: (512) 641-8800

I. PRODUCT IDENTIFICATION

1 HEALTH, 1 FLAMMABILITY, 0 REACTIVITY & (Blank) INSTABILITY based on "Standard System for the Identification of the Fire Hazards of Materials, NFPA No. 704, 1985 Edition"

MANUFACTURER'S NAME AND ADDRESS: Industrial Lubricants Co., P.O. Box 10290, San Antonio, Texas 78210

CHEMICAL NAME: Ethylene Glycol with corrosion inhibitors CAS NUMBER: N/A

SYNONYMS/COMMON NAMES: Antifreeze

CHEMICAL FORMULA: NA

DOT PROPER SHIPPING NAME: NA
DOT HAZARD CLASS: NA
DOT I.D. NUMBER: NA HAZARDOUS SUBSTANCE: NA

II. HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	HAZARD DATA	CAS NUMBER	%
Ethylene Glycol	PEL = None Established TLV = 50 ppm Ceiling as vapor and mist combined.	107-21-1	100
with proprietary organic and inorganic corrosion inhibitors			

(See Section V)

The materials in this product are listed in TSCA Inventory. Not listed as carcinogenic by IARC, NTP, OSHA, ACGIH.

III. PHYSICAL DATA

BOILING RANGE @ 760 mm Hg: 325°F EVAPORATION RATE (BuAc=1): 1

MELTING POINT: N/A % VOLATILES BY VOL.: N/A

VAPOR PRESSURE: 1 mm Hg 20°C VAPOR DENSITY (Air=1): 2

SOLUBILITY IN H_2O % BY WT: N/A

APPEARANCE AND ODOR: Blue liquid with light organic odor

pH. N/A

CAS - Chemical Abstract Service Number
PEL - OSHA Permissible Exposure Limit
TLV - *TLV®, ACGIH Threshold Limit Value, Current*

N/A = No relevant information found or not available
NA = Not applicable

IV. FIRE AND EXPLOSION DATA

FLASH POINT: 250°F Clev. Open Cup AUTOIGNITION TEMPERATURE: ~775°C

FLAMMABLE LIMITS IN AIR, % BY VOLUME- UPPER: N/A LOWER. N/A

EXTINGUISHING MEDIA: Use water spray, dry chemical foam, or carbon dioxide. Water or foam may cause frothing.

SPECIAL FIRE FIGHTING PROCEDURES: Storage containers exposed to fire should be kept cool with water spray.
UNUSUAL FIRE AND EXPLOSION HAZARD: None.

V. HEALTH HAZARD INFORMATION

HEALTH HAZARD DATA: At 25°C air can saturate to 131 ppm (~328 mg/m^3). At 140 mg/m^3 throat irritation, mild headache and low backache was experienced by human volunteers.

MEDICAL CONDITION GENERALLY AGGRAVATED BY EXPOSURE:
Conditions which have the same symptoms or effects as stated below.

MEDICAL LIMITATIONS: N/A

ROUTES OF EXPOSURE

INHALATION: At room temperature toxic concentrations of vapor are unlikely to occur. Exposure to high concentrations of vapor may cause symptoms of intoxication and possible pulmonary edema.

SKIN CONTACT: No skin irritation is expected.

SKIN ABSORPTION: Absorption through skin may contribute to intoxication.

EYE CONTACT: May cause mild eye irritation.

INGESTION: Can cause intoxication and coma. Symptoms may include lack of appetite, nausea, vomiting, abdominal pain, weakness, tremors, convulsions, respiratory arrest, cardiovascular collapse, and kidney failure.

EFFECTS OF OVEREXPOSURE

ACUTE: See Routes Of Exposure.

CHRONIC: Repeated ingestion may result in kidney disease.

EMERGENCY AND FIRST AID PROCEDURES

EYES: OBJECT IS TO FLUSH MATERIAL OUT THEN SEEK MEDICAL ATTENTION. IMMEDIATELY flush eyes with large amounts of water for at least 15 minutes holding lids apart to ensure flushing of the entire eye surface. SEEK MEDICAL ATTENTION IMMEDIATELY.

SKIN. Wash with plenty of soap and water for 15 minutes. Remove contaminated clothing and footwear.

INHALATION: Get person out of contaminated area to fresh air. If breathing has stopped, resuscitate and administer oxygen if readily available. SEEK MEDICAL ATTENTION IMMEDIATELY.

INGESTION: NEVER give anything by mouth to an unconscious person. Have conscious patient drink several glasses of water, then induce vomiting by having patient tickle back of throat with finger. Keep airway clear. SEEK MEDICAL ATTENTION IMMEDIATELY.

VI. REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY: Under normal conditions, the material is stable.

INCOMPATIBILITY: Avoid contact with strong oxidizers and sulfuric acid.

HAZARDOUS DECOMPOSITION PRODUCTS: The materials may decompose at high temperatures to form carbon dioxide and water vapor.

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION: Material is not known to polymerize.

VII. ENVIRONMENTAL PROCEDURES

SPILLS OR RELEASES: If material is spilled or released to the atmosphere, steps should be taken to contain liquids and prevent discharges to streams or sewer systems; and control or stop the loss of volatile materials to the atmosphere. Spills or releases should be reported, if required, to the appropriate local, state and federal regulatory agencies.

DISPOSAL: Clean-up action should be carefully planned and executed. Shipment, storage, and/or disposal of waste materials are regulated and action to handle or dispose of spilled or released materials must meet all applicable local, state and federal rules and regulations. If any question exists, the appropriate agencies should be contacted to assure proper action being taken. Waste product and contaminated material will be considered a hazardous waste if the flash point is less than 140°F requiring disposal at an approved hazardous waste facility.

VIII. INDUSTRIAL HYGIENE CONTROL MEASURES

VENTILATION REQUIREMENTS: Special ventilation not required under normal use. Use local exhaust ventilation where mist, spray or vapor may be generated.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY: Respiratory protection not required under normal use. Use NIOSH/MSHA approved respirator following manufacturer's recommendation where mist, spray or vapor may be generated.

EYE: Chemical goggles should be worn as a precautionary measure.

GLOVES: Impervious gloves should be worn.

OTHER CLOTHING AND EQUIPMENT: Standard work clothing. Wash contaminated clothing in mild soap and water and dry before reuse. Shower and eyewash facilities should be accessible.

MONITORING EXPOSURE

BIOLOGICAL: Urinary oxalate has been suggested as a measure of Ethylene Glycol exposure.

PERSONAL/AREA: Use NIOSH P&CAM NO. 338.

ATLAS Product Specification Sheet

H.D. Diesel Engine Anti-Freeze/Coolant

Atlas H.D. Diesel Engine Anti-Freeze/Coolant is an ethylene glycol base anti-freeze/coolant blended exclusively for heavy duty diesel engines in trucks, off-road vehicles and equipment where low silicate anti-freeze/coolant is specified. Provides protection from freezing, overheating, foaming, rust and corrosion. It is not intended nor recommended for passenger car or light truck usage.

Atlas H.D. Diesel Engine Anti-Freeze/ Coolant meets the performance requirements of the following automotive industry specifications:

General Motors ..... GM1899M and GM6038M
ASTM—(American Society for Testing and Materials ..... D3306 and D4340
SAE—(Society of Automotive Engineers) ..... J1034 and D814C
ATA—(American Trucking Association) RP-302
Cummins Bulletin 85T8-2

COMPOSITION BY WEIGHT (TYPICAL VALUES)

TOTAL GLYCOLS 95%
(Monoethylene Glycol—87% Min.)
(Diethylene Glycol—8% Max.)
WATER 3%
INHIBITORS 2%
SILICATES ..... less than .1%
DYE ..... TRACE

PHYSICAL PROPERTIES

TEST	ASTM TEST METHOD	ASTM SPECIFICATION	ATLAS SPECIFICATION
Specific Gravity 60°F/60°F	D-1122	1.110—1.145	1.120—1.135
Boiling Point (Undiluted)	D-1120	300°F min.	320°F min.
Flash Point	D-92	None	240°F min.
Freezing Point (50% solution)	D-1177	-34°F max.	-34°F max.
Reserve Alkalinity	D-1121	10.0 ml. min.	12.0 ml. min.
Neutrality	D-1287	5.5—11.0 pH	7.0—11.0 pH
Foam Sensitivity (Break Time—5 Sec. Max.)	D-1881	150 ml. max. (volume)	100 ml. max. (volume)
Ash Content (Wgt. —%)	D-1119	5.0 max.	3.0 max.
Odor	—	Not offensive	Mild
Color	—	Distinctive	Green to Blue/Green
Effect On Automotive Paint	D-1882	No persistent change in the surface appearance	Same as ASTM
Glassware Corrosion (Weight Loss-Mg.)	D-1384 Copper Solder Brass Steel Cast Iron Aluminum	 10.0 mg. 30.0 mg. 10.0 mg. 10.0 mg. 10.0 mg. 30.0 mg.	 5.0 mg. 10.0 mg. 5.0 mg. 5.0 mg. 5.0 mg. 10.0 mg.
Simulated Service *(Corrosion-* Wgt. Loss Mg.)	D-2570 Copper Solder Brass Steel Cast Iron Aluminum	 20.0 mg. 60.0 mg. 20.0 mg. 20.0 mg. 20.0 mg. 60.0 mg.	 15.0 mg. 30.0 mg. 15.0 mg. 15.0 mg. 15.0 mg. 30.0 mg.

(See Other Side for ATLAS Perma Guard Anti-Freeze/Coolant Specifications)

Diesel / Anti-free

770

SECTION V — HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE 50 ppm ceiling (vapor), 10 mg/m³ (particulate) - ACGIH

EFFECTS OF OVEREXPOSURE

Inhalation: Prolonged breathing of vapor or mist can cause respiratory irritation and may result in unconsciousness.

Ingestion: Swallowing will cause acute poisoning resulting in severe abdominal disturbances, CNS depression, possible respiratory &/or renal failure.

Eye Contact: Eye contact with the liquid will result in temporary irritation. Eye contact with the vapors may result in irritation.

Skin Contact: Prolonged skin contact with the liquid has a dehydrating effect resulting in a temporary irritation. Vapors have little or not effect on the skin.

FIRST AID PROCEDURES

EYES: FLUSH WITH FLOWING WATER AT LEAST 15 MINUTES	For eyes, get medical attention. Wash affected skin areas with soap and water. If irritation develops, consult a physician. If inhaled, move to fresh air. Aid in breathing, if necessary, and get medical attention. If swallowed, induce vomiting and get immediate medical attention.	NEVER GIVE FLUIDS OR INDUCE VOMITING IF PATIENT IS UNCONSCIOUS OR HAVING CONVULSIONS

SECTION VI — REACTIVITY DATA

STABILITY	STABLE	X	CONDITIONS TO AVOID:
	UNSTABLE		

CHEMICAL INCOMPATIBILITY: N/A

HAZARDOUS DECOMPOSITION PRODUCTS: None

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID:
	DOES NOT OCCUR	X	

CORROSIVE TO METAL ☒ NO ☐ YES, TYPE: OXIDIZER: ☒ NO ☐ YES

SECTION VII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION

Avoid breathing fumes or vapors of heated product. Do not enter tanks without breathing equipment. If ventilation is not adequate use an approved organic vapor respirator.

VENTILATION

LOCAL EXHAUST: Recommended near heated product.

MECHANICAL (GENERAL):

EYE PROTECTION

If splashing can occur use chemical goggles or full face shield.

PROTECTIVE CLOTHING

Use rubber gloves, apron, and shoes. Remove contaminated clothing immediately and wash before reuse.

OTHER

Diesel / Anti-freeze

581770

SECTION X - PRODUCT LABEL

ETHYLENE GLYCOL

WARNING!

Harmful Or Fatal If Swallowed.
Prolonged Or Repeated Breathing Of Vapor Or Mist Is Harmful.
Contact May Cause Irritation.

Do Not Take Internally.
Do Not Breath Vapor.
Avoid Contact With Food And Foodstuffs.

FIRST AID:

Eyes . In case of contact, and to prevent irritation, flush eyes with free-flowing water for at least 15 minutes.

Skin Wash contacted areas of skin with water. Remove contaminated clothing immediately and launder before reuse.

Ingestion If swallowed, induce vomiting and call a physician immediately. Never give fluids or induce vomiting if patient is unconscious or having convulsions.

Inhalation For prolonged inhalation, move patient to fresh air and call a physician. If necessary administer artificial respiration.

PROPER HANDLING AND STORAGE:

Wear chemical goggles, rubber gloves, apron and shoes when handling. Keep containers closed. Preserve warning label on containers.

In case of spill, clean up quickly as product is slippery, wash away small amounts with cool water. Absorb large amounts on absorbent material or dike and pump into drums for disposal. Incinerate or bury in approved landfill under guidance of local EPA office. Prevent run-off onto public land or waterways.

Ethylene glycol is not a regulated product.

Emptied containers may be unsafe due to presence of residues. Preserve this label on the container until the drum has been properly cleaned or renovated.

IN CASE OF FIRE, use water spray, alcohol foam, or CO_2. Wear self-contained breathing apparatus or an approved organic vapor respirator. Do not breath fumes of heated or burning product.

FOR INDUSTRY USE ONLY